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NEW MANUAL

OF

VETERINARY MEDICINE

OR THE

TREATMENT

OF THE

DISEASES OF THE HORSE.

BY M. D. CADWALADER,

VETERINARY SURGEON, OF THIRTY YEARS PRACTICE.

SECOND EDITION;

With the Experience of Fourteen Years added to the Work.

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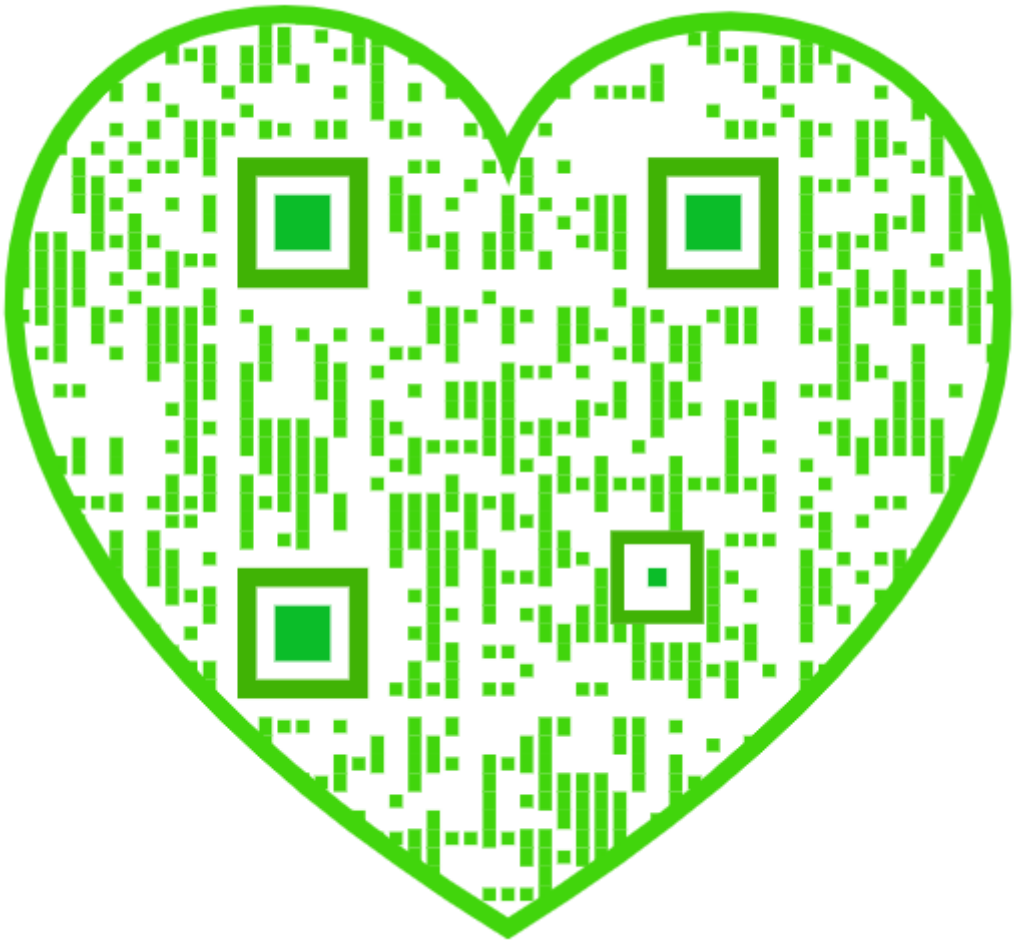

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PREFACE.

THE great necessity which has heretofore existed for a short and concise work of this kind, containing the symptoms and treatment of the great variety of diseases to which the Horse is subject, and which at the same time, would be thoroughly adapted to the understanding of all classes, has long been a desideratum in the mind of the Author, and has induced him to undertake the present manual, which, he flatters himself, will be found of vast utility.

It is his purpose, to present to the public, in as brief and plain a style as the nature of of the subject will permit, a correct and interesting history of the great variety of diseases incident to the Horse, together with the symptoms by which each one may be distinguished from all others, and the remedies which, from a long and practical experience and success, as a Veterinary Surgeon, he has found most successful in their removal.

The great objection to all former works on this subject, both in this and European countries, consists in the very intricate style in which they are written, and the great variety

of technical terms they contain. They also contain prescriptions of various articles which cannot be obtained in this country, all which render them in a great measure, useless, except to those only whose entire business it is to practice the "veterinary art," and for this reason it is his aim to exhibit a style which will be both correct and useful to every one, and at the same time be free from all the ambitious ornaments and faults which are justly chargeable to writers on this subject, in this and other countries.

After having the experience of fourteen years since the first edition was issued, and a part of that time traveling and teaching the veterinary art, through the east and west, and having spent three years in Cincinnati Horse Market, where he gained a high reputation, and also three years in the employ of the Government at Camp Monroe and at Hamilton: and having had unlimited opportunities for investigating and treating all the diseases of the Horse, that seldom falls to the lot of any one man; and feeling confident that he can fill a void that has heretofore existed, he has rewritten this Manual and has given the public the benefit of his large experience, and offers them hereby a second edition of the work which proved so popular in its first edition, and respectfully dedicates it to all who do him the honor of thoroughly testing its merits.

MANUAL

OF

VETERINARY MEDICINE.

In all the Universe, the Creator has not given unto man a more useful, a more intelligent and more grateful animal than the Horse. He is a thinking, calculating and sociable animal. Treat him as he ought to be treated, and he is thy companion, thy friend.

The Horse in a state of nature is subject to few diseases, but the further he is removed from his natural condition, the more numerous and complicated his diseases become, and in consequence of the use and abuse of the Horse by man, the horse, like man, has become subject to a great variety of diseases, which, like those affecting the human system, are frequently under the control of medicinal remedies; and the same general means which are efficacious in healing the disorders of our race, are equally so in controlling those of the inferior part of the animal creation.

The great value of the Horse to man, has rendered him from the earliest period, the object of study and attention, not only while in health, but also when laboring under disease. For the latter state, a peculiar system was

early formed, including a Materia Medica and a general mode of treatment considerably different from those of the human patients. Xenophen is the oldest Veterinary writer on record; but his treatment is confined to the training and management of the Horse for war and the chase. The chief merit of the ancient writers on this subject consists in dietary rules and domestic management which they propose. Their medical prescriptions are said to be an inconsistent and often discordant jumble of many articles devoid of rational aim or probable efficacy. On the revival of learning in Europe, when the anatomy and physiology of the human body had become grand objects of research in Italian schools, Veterinerary Anatomy attracted the attention of Ruini, and others, whose descriptive labors on the body of the horse have since served for the ground work and model of all the schools in Europe. The works of the Veterinary writers of antiquity were eagerly sought and translated into French and the arts extensively cultivated, sometimes under regular medical professors.

The new science having been extended over a great part of Europe, could scarcely fail of occasional communication with England. Nevertheless the medical treatment of horses and other domestic animals continued exclusively in the hands of Farriers and Cow Doctors until some time in the first quarter of the eighth century. At this period, that branch of the art which relates to the medical and surgical treatment of the Horse attracted the attention of Wm. Gibson, who had acted in the capacity of army surgeon in the wars of Queen Anne. He was the first auther of the

regular medical profession in England, who attempted to improve veterinary science, and the publication of his work forms an era in its annals. Since, his work became, and has continued to the present day, the basis of the English. The eighteenth century was abundantly fruitful in veterinary pursuits and publications. France took the lead and a zeal for this science pervaded Germany. Colleges were established in various countries with the expressed view of cultivating this branch of the medical art. It is said that the French have improved the anatomical and surgical branches of the art, and the English those branches which relate to the operation of medicine.

The first veterinary school was instituted at Lyons, in 1762, another in Berlin in 1792, and one near London the same year. In these Colleges lectures were given and degrees conferred. In the diplomas the graduate is denominated Veterinary Surgeon. A great number of those surgeons have been dispersed in the armies of Europe as well as through the different countries, where they have been employed in the medical and surgical treatment of diseased animals to the great advantage of their owners. It is evident that the light of science has shone conspicuously in Europe on the Horse in relation to his treatment, both when in health and when laboring under disease. In the United States we have no institution for the cultivation of this branch of knowledge. The press, however, has been prolific in the production of works treating on the various branches of the veterinary art; and many persons, by their aid, have rendered themselves competent to administer to the

Horse, in case of disease, in a rational manner. Nevertheless, the practice of animal medicine is confined chiefly to illiterate men who, from their laborious habits, or from other causes, have not attained to that degree of information on animal diseases and the general effects of medicine, that might enable them to prescribe their remedies on scientific principles. But this state of things is not peculiar to our country, for notwithstanding the laudable efforts of enlightened men in Europe, the blacksmiths form a vast majority of the horse-surgeons and physicians in every part of it. The attention of blacksmiths was early turned to the diseases of the Horse from the practice of supplying them with shoes. The morbid affections of the foot were probably the first that attracted their notice, and descanting upon these induced the general belief that they understood every other disease which might affect the horse. These men, as laborers in iron, were originally termed *ferriers*, from the Latin word ferrum, Iron; and their craft ferriery.

The appellation of Veterinary Surgeon is applicable to persons who have received a diploma from some Veterinary College, or who have at least studied animal medicine scientifically. There are a few such individuals in the United States. While the great value of the Horse and the general increase of knowledge, certainly justify the expectation that their numbers will increase, and for this reason, I have been induced to offer to the enlightened public a few ideas taken from actual experimental knowledge.

Symptoms of Diseases of the Horse.

The diagnosis of the diseases of the Horse, without which there is no possibility of curing them, is a matter as important as it is difficult in certain cases. In order to establish it, it is necessary to subject the sick animal to an examination which not only embraces the disease and its symptoms, but extends also to the rest of the phenomena of the animal's peculiar life.

The comparison between these two orders of symptoms show us how far the present state of the Horse is removed from the natural condition, and allows us to establish our prognosis; for it is evident that the more the physiognomy of the animal differs from what it should be, the more the exterior is changed, the more the secretions and excretions have become irregular, the more serious and alarming is the character of the disease.

The examination of a sick animal, presents in some respects more, and in others less, difficulty than that of a human being affected with disease. It is more difficult, inasmuch as the practictioner must often dispense with the knowledge of a history of the case. The animal not being able to speak to inform him of his previous habits, of the injurious influences to which he has been exposed, or of his present feelings, location of his pains, or the duration of the disease, &c., and the persons who are in care of him generally afford but very incomplete information. We frequently obtain but very vague and ansatisfactory ideas

about the case. Another difficulty is owing to this, that the animals cannot tell their subjective symptoms, that is to say, what they feel, the location and nature of their pains, &c. But on the other hand, the examination is more easy in some respects, because the animal is obedient to its instinct and expresses its suffering by movements, attitudes, looks, sounds, &c. The phenomena themselves are much more distinctly marked, because there is not in this case, as in man, the imagination to exercise any influence over them. Also, every thing discovered in the sick animal may be considered as a consequence of the state of the organs. The pulse and beatings of the heart, among others, afford much more precise and certain signs than in man.

A practical knowledge of the symptoms of the disease, constitutes what is called in French veterinary works, the coup d' œil, and is very important to the veterinary surgeon. It is of the utmost importance when you examine a sick horse, to carefully collect all the symptoms, even those least marked, and to arrange them properly; for this is almost the sole and only means of ascertaining the form of the disease. The practitioner having no other resource for this except to take into account that which is represented externally in the Horse.

The order, which we proceed to the examination, is not a matter of indifference. From the manner in which it is done, we judge of the skill of the Practioner. Thus, it would be giving a very unfavorable idea of one's self to commence the examination by indicating the accessory symptoms, or to jumble and confound both orders of symptoms indiscrimi-

nately. To confine one's self to a certain order is a means for rendering the examination itself much easier.

In the first place, commence with the symptoms which are referable to the exterior of the animal, and which, as such, first fall under the cognizance of the senses, because in many cases they are sufficient to enable us to recognize the disease and even judge of its seat.

To this head may be referred:

1st. The movements and attitudes of the body and its several parts, chiefly of the head, eyes and limbs, and tail, as the animal indicates the pain he feels by striving to repel or avoid the pernicious influence from without or to relieve the sufferings which torture him.

2d. The look and Physiognomy. To be sure it cannot be said that the horse has a Physiognomy in the sense in which this term is applied to the human subject.

Still the character, the breed, and the state of health and of disease, are expressed in him in a very striking manner. His Physiognomy becomes particularly characteristic in tetanus, internal gangrene, vertigo and Pneumonia. It is for this reason we should attach a special importance to the examination of the eye.

After having considered all the symptoms connected with the exterior of the body of the animal, we next proceed to examine the pulse and beating of the heart. These two phenomena have great value as characteristic signs in the diseases of the horse.

The pulse is felt on embracing the submaxillary artery, between the index and middle finger, as it crosses the anterior portion of the lower jaw, or inside of the fore-arm near the

sternum or breast bone, where lies the plait vein.

With respect to the beatings of the heart, they are felt by placing the palm of the hand on the horse's left side, not far from the elbow. But to be able to judge of a disease from the pulsation of the arterial system, it is necessary to know the character of the pulse in a state of health, and to have attained a certain degree of dexterity in examining it. The number of pulsation is about from thirty-two to forty per minute in the adult horse, when in health, and from forty-six to fifty-five in young horses. If the animal is irritable, his pulse is more frequent and harder; that is, it strikes with more force against the finger, which is generally considered a sign of vigor. It is slower and softer in Phlegmatic Breeds. The pulse varies very much in disease. It is accelerated (above fifty, sometimes seventy or eighty, and even to one hundred or more) in febrile diseases. The pulse frequent, hard and strong, indicates an inflammatory effection; when slow and weak, or easily compressed, it denotes debility, advanced age, or an anemic state of the body. When accelerated or feeble it indicates imminent danger, and worse, still, if it be of an intermitting character.

In Pneumonia it is frequently oppressed. In Enteritis, hard, quick and wiring in its feeling. If, while the mouth and feet are cold, the pulse is no longer felt, life is very seriously threatened. Oftimes the pulsations of the heart are no longer felt during the repose of the horse, but slight motion is sufficient to render them perceptible. Further, there are two circumstances which must not be lost sight of: the first is that we can judge so much better of the

state of the pulse the more tranquil the animal is: the second is that the pulse is influenced by every thing which can excite fear or uneasiness; therefore we should not examine it abruptly, nor before we have familiarized ourselves with the horse, to a certain extent.

After the pulse, the respiration should be examined: We should first attend to its frequency and its relation to the pulsation of the heart. In a state of health the horse respires from nine to ten times every minute. We should see, also, what temperature and odor the expired air may be. We examine all the phenomena with which the respiration may be accompanied, such as the different sounds, cough, &c.

From the respiration we pass on to digestion. The apparatus destined for the performance of this function furnishes important diagnostic signs, inasmuch as it enjoys a great predominance in our domestic animals, and independently of the diseases peculiar to it, it participates in those of several other systems and organs.

We investigate the signs which may be derived from hunger, thirst, the manner in which the animal takes its food, masticates and swallows it, the state of the abdomen, the quality of the alvine ejections, &c.

The total loss of appetite is a sign much more serious in domestic animals than in man. It is, therefore, always a favorable sign when they take food, provided, however, that they are conscious of what they do. A symptom worthy of remark is, that inflammatory diseases are accompanied by an increase in the contraction of the intestinal parieties and a diminution in the secretions, which may be

ascertained by the small size, hardness, dryness, the more or less deep color of the evacuations, whilst the contrary takes place in putrid diseases, where the alvine ejections are united into larger masses, and generally covered with mucus. The examination of the urinary organs is necessary as well in reference to the diseases peculiar to the apparatus itself, because it contributes to make known the general state of inflammatory putridity and spasms, so that it furnishes signs of the highest importance.

Lastly, we must direct attention to the state of the mucus membranes, those chiefly of the mouth and nose. Their pale or red color, and the character of their secretions, afford symptoms sufficient to indicate certain diseases.

The examination should bear not only on the aberations which the vital phenomena have undergone, but also on the causes of the diseases, if they do not appear from the symptoms themselves. As every disease must be considered as the product of two factors, an internal or subjective cause, and an external or objective, the veterinary practitioner should give his investigations a two-fold direction.

With respect to the animal, he takes into consideration his age, breed, constitution, mode of life, the labor he has had to perform, the state of health he enjoyed hitherto, the diseases with which he had been previously attacked, and the state of those animals of the same breed.

With respect to the second point of view, he looks to the state of the atmosphere, the kind of food given him, the character of the stabling, the first morbid phenomena which manifested themselves, the course of the disease

up to the present period, and the treatment employed.

Most of the diseases of the horse are accompanied with pains which manifest themselves externally, according to the parts whence they derive their origin. If the painful part is a foot, the animal assumes an attitude such as may spare the part affected. When standing, he throws the leg forward, so that it may have less to do than the other in supporting the weight of the body. In lamitis, when standing, the weight is thrown on the heels. When walking, he rests less on it; when one touches it, he sometimes draws it back or raises the foot. If the pain has its seat elsewhere, the animal frequently turns his head to this part, or strikes it with the foot. In case the pain is very severe, he remains as if struck with stupor, and his head inclined to the ground, or else scrapes with his fore feet or stamps with the hind foot, or rolls himself upon the ground.

The eyes, even when they are not the seat of disease, often express the state of the animal health. When dull and full of water, they indicate exhaustion and weakness; when bright, full of force, and project out of the orbits, they denote an inflammatory state, or sometimes very acute pain.

Every time the hair is observed to be dull and staring, it is a proof of disease, for it is shining and smooth when the animal is in good health. This symptom denotes a bad nutrition, insufficient food, more especially abdominal affections, when emaciation is combined with it.

When the respiration is slow and calm, we conclude that there is no fever, and that the pectoral organs are healthy. When it is hur-

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ried, violent, and acc
of the flanks, it frequ
ence of fever, more especially of inflammatory fever, and when there is cough and sonorous breathing, we infer the existence of some disease of the lungs or windpipe. If the horse remains constantly standing up, the fore legs wide apart, we are warranted in presuming a disease of the thoracic organs.

Pneumonia, inflammation of the diaphragm, water in the chest, &c., because in all these cases respiration is performed with ease whilst standing. When the animal always remains lying down, it is a proof of great debility, or of pain, or some disease of the feet.

Every time that certain parts of the body are either burning hot or very cold, we conclude that there is some disease. Heat of the head and the mouth, with shaking or trembling, and a staring coat, are invariably symptoms of fever; cold in the head, ears and feet, frequently indicate great debility and exhaustion of the animal.

Inflammation in General.

As a rule, I am opposed to the general practice of bleeding; but as some favor it, I insert the following, that such may be instructed when and where to bleed.

Blood is generally abstracted from the jugular vein, so the general quantity may be lessened, but if it can be taken from the neighborhood of the diseased part, it will be pre-